



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/644,655

08/21/2003

Leonard Stulc

456.02.101US1

5450

7590

11/18/2004

Mark A. Litman & Associates, P.A.
York Business Center
Suite 205
3209 West 76th St.
Edina, MN 55435

EXAMINER

BEATTY, ROBERT B

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 11/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,655

Applicant(s)

STULC ET AL.

Examiner

Robert Beatty

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete (i.e. there are no drawings filed). 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. Claims 3,6-13 are objected to because of the following informalities:

in claim 3, line 9, "image bearing member" should be changed to --
intermediate transfer member--;

in claim 13, line 1, "11" should be changed to --12-- since the fluorosilicone has
not been previously mentioned.

Appropriate correction is required.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102
that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in
public use or on sale in this country, more than one year prior to the date of application for patent in
the United States.

3. Claims 1-4,6,9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by
Takahata.

Takahata teach an image forming apparatus comprising a first toner
accepting layer (photosensitive drum) 10, a charger 11, an exposing light L,
developing devices 20, and an intermediate transfer member (ITM) 36. A latent
image will be formed on the photosensitive drum, developed with toner, first
transferred to the ITM, and than transferred to a final receiving sheet. The
intermediate transfer member comprises a non-conductive flexible film support
layer 36c, a conductive layer 36a coated on the support layer, and an electrically
resistive polymeric layer 36b as the surface layer. The electrically resistive layer

Art Unit: 2852

will not coat all the conductive layer so as to leave an edge portion so that an electrical bias can be applied to the conductive layer (col. 5, lines 42-53). The non-conductive support layer 36c may be made of PET, the conductive layer may be made of Aluminum, and the polymeric layer may be made of urethane having a volume resistivity of $10^7 - 10^{14}$ ohm-cm (col.12, lines 5-25).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7-8,15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahata.

Takahata taught supra discloses most of what is claimed except the conductive layer being "vapor coated", the volume resistivity of Aluminum being less than 10^4 ohm-cm, and the transfer operation from the ITM to the receiving sheet results in greater than 95% toner transfer. However, the conductive layer being "vapor coated" is a process step in which patentability cannot rest in an apparatus claim (see MPEP 2113). Additionally, Aluminum being extremely conductive such that the volume resistivity is less than 10^4 ohm-cm is very well known of which the examiner takes Official Notice. Finally, although Takahata does

not teach that the toner will be transferred with greater than 95% efficiency, the examiner is believed to have provided an identical structure and therefore the examiner believes that it would have been obvious to one of ordinary skill in the art at the time the invention was made that this identical structure would have the same efficiency.

5. Claims 5,12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahata in view of Heeks et al.

Takahata taught supra discloses most of what is claimed except the support layer being between 0.05 mm - 0.25 mm thick, and the polymeric resistive surface layer being a fluoro-silicone polymer which is resistant to liquid toner carrier. Heeks et al. teach an image forming apparatus which uses liquid developer for developing latent images borne on a photoconductive member, and an intermediate transfer member to which the developed images will be transferred. The intermediate transfer member comprises three layers (see Fig. 6) wherein a non-conductive support layer 40 is made of PET having a thickness between 0.002 - 6 mm. Additionally, a surface layer 41 of fluoro-silicone is applied over an intermediate layer 42 wherein the surface layer has a volume resistivity of $10^4 - 10^{11}$ ohm-cm. See col. 11, line 14- col.12, line 25; col.13, line 62 - col.14, line 65. It would have been obvious to one of ordinary skill in the art at the time the invention was made make the support layer the claimed thickness because the

Art Unit: 2852

structural stability of the belt can be ensured. It also would have been obvious to one of ordinary skill in the art at the time the invention was made to use a fluoro-silicone outer layer because the belt can be more solvent resistant (from developer liquids, silicone oils, etc.) and thus not swell thus improving the toughness of the belt (col.5, line 64 - col.6, line 17).

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Schlueter, Jr. et al. '419 and '237, and Law et al. teach various three layer ITM's.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Beatty whose telephone number is (571) 272-2130. The examiner can normally be reached on M-F from 9 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley, can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1782.

Application/Control Number: 10/644,655

Page 7

Art Unit: 2852

A handwritten signature in black ink, appearing to read "Robert Beatty", with a long horizontal flourish extending to the right.

Robert Beatty
Primary Examiner
Art Unit 2852

November 15, 2004